

What is claimed is:

1. A system comprising:
a plurality of electronic devices, each electronic device configured to operate under a different supply voltage;
a single supply source having multiple voltage taps to provide the different supply voltages without up-converting a voltage level or down-converting a voltage level.
2. The system of claim 1, wherein the single supply source is a battery having multiple voltage taps.
3. The system of claim 2, wherein the battery includes a common substrate on which a plurality of battery regions are disposed, each battery region providing a supply voltage, the supply voltage of at least one battery region at a rated voltage level different than the other battery regions of the plurality of battery regions.
4. The system of claim 3, wherein the common substrate is a rigid platform.
5. The system of claim 3, wherein the common substrate is a flexible platform in a folded configuration.
6. The system of claim 3, wherein the common substrate is a flexible platform in a rolled configuration.
7. The system of claim 3, wherein the system is a hearing aid.
8. The system of claim 7, wherein the hearing aid further includes a battery management unit having circuitry to monitor the voltage level of each battery region.

9. The system of claim 8, wherein the battery management unit includes circuitry to output an audible notice when the voltage level of a battery region reaches a minimum operational level.
10. The system of claim 7, wherein the battery includes three battery regions on a common substrate.
11. The system of claim 7, wherein the battery includes a 1.3V tap, a 2.6V tap, and a 3.8V tap.
12. The system of claim 7, wherein the hearing aid further includes a battery recharge control.
13. The system of claim 12, wherein the battery recharge control includes a switching circuit to independently couple a voltage tap to a recharge circuit.
14. The system of claim 12, wherein the battery recharge control includes a number of voltage regulators to limit the voltage recharge to a voltage at or below a selected recharge voltage level.
15. The system of claim 7, wherein the hearing aid includes a switching network to selectively switch an electronic device of the plurality of electronic devices to any voltage tap of the multiple voltage taps.
16. The system of claim 7, wherein the hearing aid includes:
 - a microphone;
 - a signal processor; and
 - an amplifier, wherein each of the microphone, the signal processor, and the amplifier are powered by a different voltage tap of the battery.

17. The system of claim 7, wherein the hearing aid further includes one or more regulators, each regulator associated with a different voltage tap of the battery.
18. The system of claim 7, wherein the hearing aid further includes a wireless link that operates with a supply voltage greater than 1.3V.
19. A battery comprising:
 - a substrate;
 - a plurality of battery regions disposed on the substrate, each battery region to provide a different supply voltage;
 - a plurality of buffer regions, one or more buffer regions separating each battery region; and
 - a plurality of voltage taps, wherein each battery region has a voltage tap.
20. The battery of claim 19, wherein the substrate is a rigid platform.
21. The battery of claim 19, wherein the substrate is a flexible platform in a folded configuration.
22. The battery of claim 19, wherein the substrate is a flexible platform in a rolled configuration.
23. The battery of claim 19, wherein the number of battery regions is three.
24. The battery of claim 19, wherein the battery includes a 1.3V supply voltage, a 2.6V supply voltage, and a 3.8V supply voltage.
25. The battery of claim 19, further including a reference contact common to each battery region.

26. The battery of claim 19, further including a number of reference contacts, each reference contact coupled to a different battery region.
27. The battery of claim 19, wherein one or more of the battery regions are rechargeable.
28. A method of manufacturing a hearing aid comprising:
mounting a number of electronic devices into a housing of a hearing aid, each electronic device configured to operate under a different supply voltage; and
providing the hearing aid with a single supply source to provide the different supply voltages without up-converting a voltage level or down-converting a voltage level.
29. The method of claim 28, wherein providing the hearing aid with a single supply source includes providing the hearing aid with a battery having multiple voltage taps.
30. The method of claim 29, wherein providing the hearing aid with a battery having multiple voltage taps includes providing the battery having a common substrate on which a plurality of battery regions are disposed, each battery region providing a supply voltage, the supply voltage of at least one battery region at a rated voltage level different than the other battery region of the plurality of battery regions.
31. The method of claim 30, wherein providing a battery having a common substrate includes providing the battery with the common substrate formed as a rigid platform.
32. The method of claim 30, wherein providing a battery having a common substrate includes providing the battery with the common substrate formed as a flexible platform in a folded configuration.
33. The method of claim 30, wherein providing a battery having a common substrate includes providing the battery with the common substrate formed as a flexible platform in a rolled configuration.

34. The method of claim 29, wherein the method further includes providing a wireless link that operates with a supply voltage greater than 1.3V.